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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,961	07/10/2001	Hai Shum		7271
7590	08/12/2004		EXAMINER	
Hai Shum 131 Maynard St. San Francisco, CA 94112			HILLERY, NATHAN	
			ART UNIT	PAPER NUMBER
			2176	
DATE MAILED: 08/12/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	S HUM, HAI
	09/901,961	Nathan Hillery	
Examiner		Art Unit	2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 10 July 2001.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-3 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 10 July 2001 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 7/10/01
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____

DETAILED ACTION

1. This action is responsive to communications: Application filed on 7/10/04.
2. Claims 1 – 3 are pending in the case. Claim 1 is independent.

Information Disclosure Statement

3. The information disclosure statement filed 7/10/04 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered. Further, it is advised that the Applicant provide a copy or resubmit a copy of all foreign references along with another IDS. Thus, the foreign reference(s) will not be considered at this time.

4. The information disclosure statement filed 7/10/04 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

Oath/Declaration

5. A new oath or declaration is required because Applicant has not given a post office address anywhere in the application papers as required by 37 CFR 1.33(a), which was in effect at the time of filing of the oath or declaration. A statement over applicant's signature providing a complete post office address is required. The wording of an oath

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or declaration cannot be amended. If the wording is not correct or if all of the required affirmations have not been made or if it has not been properly subscribed to, a new oath or declaration is required. The new oath or declaration must properly identify the application of which it is to form a part, preferably by application number and filing date in the body of the oath or declaration. See MPEP §§ 602.01 and 602.02.

Specification

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.

- (e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:

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- (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
- (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are solved by the applicant's invention. This item may also be titled "Background Art."

(f) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

(g) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.

(h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

(i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR

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1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).

(j) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

6. The disclosure is objected to because of the following informalities: gross spelling and punctuation errors. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 1 – 3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claims 1 – 3 are rejected as failing to define the invention in the manner required by 35 U.S.C. 112, second paragraph.

The claim(s) are narrative in form and replete with indefinite and functional or operational language. The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a

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manner as to present a complete operative device. The claim(s) must be in one sentence form only. Note the format of the claims in the patent(s) cited.

10. The claims are generally narrative and indefinite, failing to conform with current U.S. practice. They are replete with grammatical and idiomatic errors.

11. **Regarding independent claim 1**, the metes and bounds of "a chronological order" are unclear. Consequently, all subsequent recitations of "a chronological order" are also rejected.

12. **Regarding independent claim 1**, the metes and bounds of "selecting means" are unclear. Consequently, all subsequent recitations of "selecting means" are also rejected.

13. **Regarding dependent claim 2**, the metes and bounds of "various geographical region" are unclear. Consequently, all subsequent recitations of "various geographical region" are also rejected.

14. The term "dominant" in claim 2 is a relative term which renders the claim indefinite. The term "dominant" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Consequently, the phrase "dominant meanings" has been rendered indefinite. Further, all subsequent recitations of the phrase "dominant meanings" are also rejected.

15. **Regarding dependent claim 2**, it is unclear what applicant means by "each said addresses ...said division" (lines 12 – 13). Consequently, the limitation will not be considered in this examination.

16. **Regarding dependent claim 2**, it is unclear what Applicant means by "a complete spectrum" (line 3). Consequently, all subsequent recitations of "a complete spectrum" are also rejected.

17. The term "adequate" in claim 3 is a relative term which renders the claim indefinite. The term "adequate" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Consequently, the phrase "adequate memory capacity" has also been rendered indefinite. Further, all subsequent recitations of the phrase "adequate memory capacity" are also rejected.

18. The term "conventional" in claim 3 is a relative term which renders the claim indefinite. The term "conventional" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Consequently, the phrase "conventional keyboard" has also been rendered indefinite. Further, all subsequent recitations of the phrase "conventional keyboard" are also rejected.

19. The term "proper" in claim 3 is a relative term which renders the claim indefinite. The term "proper" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Consequently, the phrase "proper operating system" has also been rendered indefinite. Further, all subsequent recitations of the phrase "proper operating system" are also rejected.

20. **Regarding claims 1 – 3**, for purposes of this examination the Office will broadly interpret the claims in so far as they can be reasonably understood to further expedite prosecution of the application in anticipation of foreseeable amendments.

Claim Rejections - 35 USC § 103

21. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

22. Claims 1 – 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rennison et al. (US6154213A) and further in view of Sakaguchi (as cited by Applicant).

23. **Regarding independent claim 1**, Rennison et al. do teach that *it is also preferable to use a document splitting mechanism to decompose documents into parts, for example according to a table of contents or other document structuring information.*

This decomposition may be done manually or automatically (Column 20, lines 4 – 8), which provide for **splitting said vocabulary to a plurality of divisions**; and that a *document gatherer is used to ... provide Linguistics with chunks of plain text (where each chunk is grouped according to what part of the document structure it is from)* (Column 19, line 64 – Column 20, line 1), which provide for **arranging said vocabulary into a plurality of groups**. Rennison et al. do not explicitly teach **addresses and storage**. However, Sakaguchi teaches that *the characters are classified into groups (G1)-(G20)* (Column, lines 36 – 37), which provide for **classifying said vocabulary into a plurality of tiers**; that *each character is addressed and stored in a memory as*

hereinafter described. The characters are classified into groups (G1)-(G20), each comprising eight characters. The address of each character is determined by the address assigned to each group and the address representing the character position in each group. Reference numeral 12 designates a character generator which stores character groups. The character generator 12 generates the pattern signal of the character corresponding to the address assignment from the keyboard 11 (Column 2, lines 35 – 45), which provide for **dividing said vocabulary storage to a plurality of pages; dividing said pages to a plurality of addresses; and occupying each said addresses with a word of said vocabulary**; that a number of character groups to be inputted in the invention are entirely stored in a character generating means 1, which receives address assignments and outputs corresponding characters to the address in sequence as pattern signals. A group assigning means 2 can selectively assign the character groups per each of plural groups in batch processing. A character group addressed by the group assigning means 2 is read in sequence from the character generating means 1, and a pattern signal thereof is displayed visually on a display means 3 and the address of the assigned group is stored temporarily in a group address storing means 4. Since characters belonging to the assigned group are arranged and displayed on the display means 3, an operator transfers a cursor on the characters using a character input means 5 and selects an intended character and inputs the address thereof to a cursor address storing means 6 (Column 1, line 62 – Column 2, line 10), which provide for **displaying a series of said pages on said computer screen in a chronological order; selecting a string of said words from**

said series of said pages in a chronological order for said word processing; said word selected by selecting means. It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Rennison et al. with that of Sakaguchi because such a combination would provide the users of Rennison et al. the benefit of a device which easily inputs a variety of characters using a small number of keys (Column 1, lines 29 – 31).

24. **Regarding dependent claim 2,** Rennison et al. teach that to make a temporary Concept (indicated by a status field) for the purpose of at least being able to determine co-reference with the same terms in other documents. To prevent too many unknown words in the KB, strict frequency thresholds are used before executing this pass ... As with unknown common nouns, make a temporary Concept (only for frequently occurring NPs--further, restrict here to only noun/noun and adj/noun NPs initially). Next, attempt to unify the parts of the NP (its component words) with Concepts in the KB. Next, find relation path between these constituents; this determines the relations that are assigned between the new Concept and the constituent Concepts, so that the new Concept is "linked" in the KB (Column 20, lines 45 – 67), which provide that **said plurality of tiers of said vocabulary classified by a rank of usage frequency thereof; said plurality of groups of said vocabulary arranged under dominant meanings thereof a set of said pages of said vocabulary storage arranged for storing said words of each said groups of said dominant meanings; a team of said pages of said vocabulary storage classified for storing said words of each said tiers of said rank of usage frequency, each said pages of said vocabulary storage assigned with sequence**

and index; each said pages, wherein column numbers and row numbers supplied; each said words occupying one said address within each said page search said words occupying at least one said address within each said division; said word moved to another address by relocating means. Neither Sakaguchi nor Rennison et al. explicitly teach **geographical regions**; however, Sakaguchi teaches that *this method has limitations when characters, such as Japanese "kana" characters, Chinese characters or the like, are inputted using a small number of keys. Particularly when the frequency of inputting the characters is relatively small or when the inputted characters may be small in number, a number of keys and complicated operation are not preferable* (Column 1, lines 20 – 26), which provides that **said plurality of divisions split for using said method in various geographical region**, since Sakaguchi goes on to teach that *an object of the invention is to provide a device which easily inputs a variety of characters using a small number of keys* (Column 1, lines 29 – 31). It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the invention of Rennison et al. with that of Sakaguchi because such a combination would provide the users of Rennison et al. the benefit of a *device which easily inputs a variety of characters using a small number of keys* (Column 1, lines 29 – 31).

25. **Regarding dependent claim 3,** Rennison et al. teach that to *make a temporary Concept (indicated by a status field) for the purpose of at least being able to determine co-reference with the same terms in other documents. To prevent too many unknown words in the KB, strict frequency thresholds are used before executing this pass ... As*

with unknown common nouns, make a temporary Concept (only for frequently occurring NPs--further, restrict here to only noun/noun and adj/noun NPs initially). Next, attempt to unify the parts of the NP (its component words) with Concepts in the KB. Next, find relation path between these constituents; this determines the relations that are assigned between the new Concept and the constituent Concepts, so that the new Concept is "linked" in the KB (Column 20, lines 45 – 67) and that in order for the Structuring algorithms to make use of Knowledge about Concepts in organizing the documents, each of the extracted entities (i.e. noun phrases) in the document must be connected with the corresponding Concept in the KB (the term Topic to refers to a Concept as a nodes in the information space as opposed to nodes in the KB). The KB provides the fixed vocabulary of Concepts that are the possible labels for "what a document is about"; it suggests the relevant basic-level terms to use as meaningful general categories to put documents in. The use of a fixed vocabulary is extremely valuable for indexing and retrieval systems, for it prevents arbitrary and inconsistent strings (which are difficult to use to find documents later) from being used (e.g. Library of Congress Subject Heading System) In addition, the KB specifies constraints on the generation of new Concepts (especially collocations) discussed in the document (Column 19, lines 39 – 55), which provide that said tiers ranked from most frequently used to least frequently used; each said tiers, wherein said team of pages including a complete spectrum of dominant meanings, sharing same said usage frequency priority, sharing same said sequence; each said groups, wherein said set of pages ranked from most frequently used to least frequently used, wherein said set of pages and

said words under one said dominant meaning, sharing same said index, said tier of most frequently used, presented as a default tier, containing said team of pages of most frequently used, wherein said sequence number omitted for simplification; said page of most frequently used containing said words of most frequently used, presented as a default page, having single digit of said column and row numbers; said page of least frequently used containing said words of least frequently used, said addresses identified by said sequence number, said index letter said column numbers and row numbers. Rennison et al. disclose a system in Figs 5 and 7 for accomplishing said method of claim 1, providing adequate memory capacity for said vocabulary storage, a new use of conventional keyboard and a proper operating system, whereby said words organized, selected and processed.

Conclusion

26. An examination of this application reveals that applicant is unfamiliar with patent prosecution procedure. While an inventor may prosecute the application, lack of skill in this field usually acts as a liability in affording the maximum protection for the invention disclosed. Applicant is advised to secure the services of a registered patent attorney or agent to prosecute the application, since the value of a patent is largely dependent upon skilled preparation and prosecution. The Office cannot aid in selecting an attorney or agent.

Applicant is advised of the availability of the publication "Attorneys and Agents Registered to Practice Before the U.S. Patent and Trademark Office." This publication

is for sale by the Superintendent of Documents, U.S. Government Printing Office,
Washington, D.C. 20402.

27. The following are suggested formats for either a Certificate of Mailing or Certificate of Transmission under 37 CFR 1.8(a). The certification may be included with all correspondence concerning this application or proceeding to establish a date of mailing or transmission under 37 CFR 1.8(a). Proper use of this procedure will result in such communication being considered as timely if the established date is within the required period for reply. The Certificate should be signed by the individual actually depositing or transmitting the correspondence or by an individual who, upon information and belief, expects the correspondence to be mailed or transmitted in the normal course of business by another no later than the date indicated.

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Please refer to 37 CFR 1.6(d) and 1.8(a)(2) for filing limitations concerning facsimile transmissions and mailing, respectively.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan Hillery whose telephone number is (703) 305-4502. The examiner can normally be reached on M - F, 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H. Feild can be reached on (703) 305-9792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



JOSEPH H. FEILD
PRIMARY EXAMINER

NH